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REPORTS

OF THE

USA MARINE BIOLOGICAL STATION

宇佐臨海実験所研究報告

VOL. 8, NO. 1

Additional Records of Marine Fishes from Kochi Prefecture, Japan, Including One New Genus of the Parapercid

By

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PUBLISHED BY THE
BIOLOGICAL LABORATORY,
FACULTY OF LITERATURE AND SCIENCE,
KOCHI UNIVERSITY, JAPAN

February, 1961

Additional Records of Marine Fishes from Kochi Prefecture, Japan, Including One New Genus of the Parapercid

(With one Plate)

Toshiji KAMOHARA

(Biological Laboratory, Faculty of Literature and Science, Kōchi University)

Recently I secured, with the assistance of students of the Kōchi University and others, many specimens of fishes at various localities in Kōchi Prefecture. The collection embraces 14 species which have neuer been reported from the prefecture, and of which the following one seems to be new to the fauna of Japan:

Centriscus scutatus LINNAEUS (Centriscidae) Formosa to Red Sea

Measurements and acounts are made in the same way as in my old editions. Color notes almost all refer to material in formalin.

I wish to express my hearty thanks to the students and the other persons, whose collection has been a great contribution to the knowledge of the distribution of fishes. All the specimens are deposited at the Biological Laboratory, Faculty of Literature and Science, Kōchi University.

Syngnathidae

1. *Urocampus rikuzenius* JORDAN & SNYDER Oku-yōji (Oku-no-tatsu)

Urocampus rikuzenius JORDAN & SNYDER, Proc. U. S. Nat. Mus., 24, 1901, p. 10, pl. 7. Matsushima Bay.

Head 10.7 in length; 4.2 in trunk; depth 2.3 in head; snout 2.3; eye 9. Body short; tail long, very slender. Depth of snout subequal to diameter of eye; chin with two slender barbels, slightly longer than diameter of eye; lateral ridges of snout converging above at the tips. Occiput with a low, three-lobed, median ridge. Dorsal keels of body continuous with those of tail; lateral keels of body continuous with the ventrolateral keels of tail; median line of belly with a high, narrow keel; under part of tail with a low ridge. Dorsal on 4 rings, situated far behind above vent; distance from vent to dorsal 5 in tail; length of pectoral somewhat greater than diameter of eye; anal very small; caudal minute, scarcely discernible. Color yellowish brown, with white spots along the edges of each ring; a dark streak along median line of belly.

Described from a single specimen, 96 mm long (Cat. No. 9773), from Kannoura, Kōchi Prefecture, October 28, 1960.

Matsushima Bay to Korea.

Centriscidae

2. *Centriscus scutatus* LINNAEUS Yoroi-uo

Centriscus scutatus LINNAEUS, Syst. Nat., ed. 10th, 1758, p. 336. Eastern India. -WEBER, Fische Siboga Exped., 1913. p. 99. Lombock; Banda; Timor.
Amphisile scutata GÜNTHER, Cat. Fish., Brit. Mus., III, 1861, p. 525. East Indian and Chinese Seas. -GÜNTHER, Rept. Shore Fish., 1880, p. 53. Philippines.
Centriscus capito ŌSHIMA, Ann. Carnegie Mus., 13 (3–4), 1922, p. 263, pl. 13, fig. 3. Tōkō, Formosa.

D. III, 5; A. 9; V. ? 4. Head 2.6 in length; depth 7.4; eye 12 in head; snout 1.4; interorbital 1.2. Body elongate, very compressed, covered with a bony dorsal cuirass, which is connate with the internal skeleton, ending posteriorly in a long projection. Length of head about three in total length, measuring to tip of the projection. Pectoral inserted much behind a point midway between tip of snout and root of first dorsal spine. Ventrals inserted behind midway between anterior border of orbit and last anal ray. Color somewhat yellowish, translucent below.

Described from a single specimen, 70 mm long, measuring from end of snout to tip of dorsal spine (Cat. No. 4643), from Susaki, June 2, 1955. It was found on Formosa by Dr. Masamitsu Ōshima, but is new for Kōchi Prefecture, which must be its northernmost limit.

Formosa to Red Sea; Madagascar; New Caledonia and New Britain.

Anomalopidae

3. *Anomalops katoptron* (BLEEKER) Hikari-kinmedai

Heterophthalmus katoptron BLEEKER, Soc. Sci. Ind. Néerl., Act. (Manado), vol. 1, 1856, p. 43. Manado, Celebes.
Anomalops graeffei KNER, Aksd. Wiss. Wien, Sitz., vol. 58, pt. 1, 1868, pp. 26, 294, pl. 1, fig. 1. Kandavu.
Anomalops palpebratus (non PALLAS) GÜNTHER, Mus. Godeffroy, Jour., vol. 5, pt. 11, 1876, p. 143, pl. 91, fig. A. Paumotus.
Anomalops katoptron ABE, Annot. Zool. Jap., 21 (1), 1942, p. 55, fig. 1. Kominato, Chiba Prefecture. -ABE, Jap. Jour. Ichthy., 1 (5), 1951, p. 304. Hachijō Island.

D. IV-I, 14; A. II, 11; P. 18; V. I, 5. Head 3 in length; depth 2.6; eye 3 in head; snout 5.4; interorbital 3.7; depth of caudal peduncle 3.3. Scales irregularly arranged; pored scales in lateral line ca. 60; ca. 12 scales above lateral line; keeled scales between vent and base of ventral 18; gill rakers on first arch 10+23. Pseudobranchiae long as gill filaments. Teeth on jaws and palatines minute, forming bands; none on vomer. Color uniform dusky brown; spinous dorsal blackish; soft dorsal brown, with broad subterminal blackish longitudinal band and another less wide, basally. Anal brown, with broad subterminal blackish longitudinal band. Pectoral and ventral dusky brown; caudal dusky brown, upper and lower edges narrowly pale. Subocular luminous organs whitish.

Described from a single specimen, ca. 230 mm long (Cat. No. 8879), from Kashiwajima, April 3, 1960. Caudal ends broken off. In 1942 Dr. Abe, Tōkaiku Suisan Kenkyūsho, reported a single specimen, ca. 200 mm long, from Kominato, Chiba Prefecture and he also reported a specimen, ca. 200 mm long, from Hachijō Island in 1951. Perhaps my specimen will be the third record of occurrence in Japan. A rare fish, whose presence in the waters of Kōchi Prefecture was unexpected.

Chiba Prefecture and Hachijō Island to the East Indies.

Coryphaenidae

4. *Coryphaena equisetis* LINNAEUS Ebisu-shiira (Fig. 1)

Coryphaena equisetis LINNAEUS, Syst. Nat., ed. 10th, 1758, p. 261. Pelagic; after Osbeck; misprinted *equieselis*. -GÜNTHER, Mus. Godeffroy, Jour., vol. 5, pt. 11, 1876, p. 147, pl. 93, fig. A. Between Tahiti and Hawaiian islands.
Coryphaena lessonii CUVIER & VALENCIENNES, Hist. Nat. Poiss., vol. 9, 1833, p. 228 (307). India.
Coryphaena azorica CUVIER & VALENCIENNES, ibid., p. 227 (306). Azores.
Lampugus neapolitanus CUVIER & VALENCIENNES, ibid., p. 241 (325). Naples; after Bloch.
Lampugus punctulatus CUVIER & VALENCIENNES, ibid., p. 242 (329), Atlantic at equator.
Coryphaena socialis BENNETT, Narrative Whaling Voyage, vol. 2, 1840, p. 274. Near Laysan Island.

D. 49; A. 25; P. 20; V. I, 5; L. l. ca. 190. Head 4.2 in length; depth 3.8; eye 4.5 in head; snout 3.3; interorbital 2.7; depth of caudal peduncle 4. Body elongate, compressed, covered with small cycloid scales. Maxillary reaching beyond frontborder of pupil; insertion of dorsal behind eye. Color brownish olive above, whitish below, with blue spots. Dorsal purplish blue, with paler oblique lines; other fins tinged with blue; caudal yellowish.

Described and figured from a single specimen, 328 mm long (Cat. No. 8855), from Susaki by Mr. Tetsushi Toyonaga, a student of Kōchi University, January 8, 1960. The figure is the work of Mr. Toyonaga. I had long believed this species occurred in the waters of Kōchi Prefecture, and was therefore much pleased to collect it.

Pelagic in open warm seas, extending northwards to Shimane Prefecture.

Carangidae

5. *Decapterus macrosoma* BLEEKER Kusaya-moro

Decapterus macrosoma BLEEKER, Nat. Tydschr. Nederl. Ind., I, 1851, p. 358. -WAKIYA, Ann. Carnegie Mus., vol. 15, nos. 2—3, 1924, p. 153, pl. 16, fig. 2. -BARNARD, Ann. S. Afric. Mus., 21, 1925-27, p. 535.

D. VIII-I, 33-I; A. II-I, 29-I; scutes 27; gill rakers 7+21. Head 3.8 in length; depth 5.5; eye 4.4 in head; snout 3; interorbital 3.5; depth of caudal peduncle 7.6. Body very low, scarcely compressed, Maxillary reaching below a point midway between posterior nostril and front border of eye; lower jaw slightly longer than upper. Teeth feeble; none on upper jaw; a few teeth in a single series only on anterior part of lower jaw; palatines not toothed; a narrow band of teeth on the middle of posterior part of tongue. Lateral line scarcely arched; curved portion longer than straight portion, 1.1 times of latter. Scutes distinct along posterior half of straight portion of lateral line. Color dark bluish brown above, light below. A distinct black opercular spot; fins light.

Described from a single specimen, 240 mm long (Cat. No. 7798), from Kōchi City, September 24, 1950.

Ōshima, Shizuoka Prefecture to the Bonin Islands; Formosa; Africa and Australia.

6. *Caranx dinema* (BLEEKER) Indo-yoroi-aji

Carangoides dinema BLEEKER, Nat. Tijds. Ned. -Ind., vol. 1, 1851, p. 365. Sea of Batavia, Java.

Caranx (Citula) dinema WAKIYA, Ann. Carnegie Mus., vol. 15, 1924, p. 178, pl. 23, fig. 2. Riu Kiu Islands.

Caranx (Carangoides) dinema WEBER & BEAUFORT, Fish. Indo-Austral. Arch., vol. 6, 1931, p. 241. Singapore etc. -ROXAS & AGCO, Philippine Jour. Sci., vol. 74, 1941, p. 35, pl. 6, fig. 3. Philippines.

D. VIII-I, 18; A. II-I, 17; scutes 23—25. Head 3—3.1 in length; depth 2; eye 3.9—4.2 in head; snout 3.2; interorbital 3; depth of caudal peduncle 4.9—5.2; gill rakers on first arch 9+19. Shape just like that of *Caranx deani* JORDAN & SEALE. Lateral line moderately arched, becoming straight below 11th soft dorsal ray. First soft ray of dorsal and of anal produced into a very long filament. Color uniform brownish; fins gray, except pectoral, which is pale; soft dorsal narrowly edged with brown; distal portion of ventral blackish; tip of caudal dusky; opercular spot distinct, brown.

The above description is drawn from two specimens, 165 (Cat. No. 8857) and 170 (Cat. No. 8856) mm long in total length respectively, from Susaki, by Mr. Tetsushi Toyonaga, a student of Kochi University, January 8, 1960. In the larger specimen 7 transverse pale dusky bands on each side of body.

Riū Kiū to India and the tropical seas of the Pacific.

Apogonidae

7. *Cheilodipterus macrodon* (LACÉPÈDE) Riū-Kiū-yarai-ishimochi

Centropomus macrodon LACÉPÈDE, Hist. Nat. Poiss., vol. 4, 1802, pp. 252, 273. Mauritius and Reunion.

Paramia octolineata BLEEKER, Atlas Ichth. Ind. Néerl., vol. 7, 1873-76, pl. (27) 305, fig. 2.

Cheilodipterus macrodon WEBER & BEAUFORT, Fish. Indo-Austral. Arch., V, 1929, p. 363. -AOYAGI, Coral Fish., Maruzen, pt. 1, 1943, p. 88, pl. 7, fig. 3. Miyako Island.

D. VI-I, 9; A. II, 9; scales 22 in lateral line to caudal base; 2 above, 6 below; gill rakers on first arch 1+6, with several rudiments above and below. Head 2.8 in length; depth 3.2; eye 3.6 in head; snout 3.6; interorbital 4.8; depth of caudal peduncle 2.7. Color pale brown; 8 longitudinal dark brown bands extending from head to caudal peduncle; a black spot at the base of caudal. First dorsal dusky; other fins pale; each lobe of caudal with a brown longitudinal narrow band at the margin.

Described from a single specimen, 142 mm in total length (Cat. No. 8574), from Mimase, Kōchi City, by Mr. Osamu Yamawaki, a student of Kōchi University, June 15, 1959. This species is a very unexpected and surprising addition to the fish fauna of Kōchi Prefecture.

Miyako Island to Red Sea; Africa; Australia and Polynesia.

Serranidae

8. *Epinephelus malabaricus* (BLOCH & SCHNEIDER) Yaito-hata (Fig. 2)

Holocentrus malabaricus BLOCH & SCHNEIDER. Syst. Ichth., 1801, p. 319, pl. 63. Tranquebar.

Holocentrus salmoides LACÉPÈDE, Hist. Nat. Poiss., vol. 3, 1802, pl. 34, fig. 3; vol. 4, 1802, p. 389. Grand Ocean.

Serranus salmonoides GÜNTHER, Cat. Fish. Brit. Mus., I, 1859, p. 128. Mauritius; Red Sea; India.

Serranus tauvina FOWLER, Mem. B. P. Bishop Mus., 10, 1928, p. 182, fig. 42. Palmyra Island.

D. XI, 14—15; A. III, 8; scales ca. 100 in lateral line; tubes ca. 58; gill rakers on first arch 8+16. Head 2.4 in length; depth 3—3.3; eye 5.4—7.3 in head; snout 4.1—4.4; interorbital 5.7—6.3; depth of caudal peduncle 3.3—3.6. Color brown, below paler. Head, body, and fins everywhere with obscure, ill-defined dark blotches, some as spots and irregular or with faded appearance. Several dark cross bands on body indistinct or absent in the adult, though present in the young.

Described from two specimens, 115 (Cat. No. 7868) and 265 (Cat. No. 3544) mm in total length respectively, from Kōchi City. I am greatly indebted to Dr. Masao Katayama, Yamaguchi University, who helped me in the identification of some species of the family *Serranidae*.

Southern Japan to the Philippines; Red Sea and Africa.

Lobotidae

9. *Lobotes surinamensis* (BLOCH) Matsudai

Holocentrus surinamensis BLOCH, Nat. Ausl. Fische, vol. 4, pt. 7, 1790, p. 98, pl. 243. Surinan.

Lobotes surinamensis BLEEKER, Atlas Ichth., vol. 8, 1876—77, p. 12, pl. (40) 318, fig. 1. Waigiu.

Lobotes auctorum BLEEKER, Versl. Akad. Amsterdam, (2) II, 1868, p. 291.

Lobotes pacificus JORDAN & EVERMANN, Bull. U. S. Nat. Mus., 47, pt. 3, 1898, p. 2857. Panama.

D. XII, 15; A. III, 11; scales 45 in lateral line; 9 scales above lateral line; gill rakers on first arch 6+13. Head 3.1 in length; depth 2.5; eye 7.9 in head; snout 4.2; interorbital 3.2; depth of caudal peduncle 2.2. Color umber, mottled variably with paler or darker. Pectoral pale yellowish brown; ventral dark; caudal margined with paler.

Described from a single specimen, 455 mm long (Cat. No. 8933), from Mimase, Kōchi City, by Messrs. Kunio Amaoka, a graduate student of Kyōto University and Osamu Yamawaki, a student of Kōchi University, July 16, 1960.

Occurs in all warm seas. In Japan it seems to go as far north as the Tohoku district.

Chaetodontidae

10. *Chaetodon selene* BLEEKER Tengu-chōchō-uo (New Japanese name) (Fig. 3)

Chaetodon selene BLEEKER, Nat. Tijds. Ned. Ind., vol. 5, 1853, p. 76. Lawajong, Solor. -HERRE & MONTALBAN, Philippine Jour. Sci., vol. 34, no. 1, 1927, p. 54, pl. 10, fig. 1. Puerto Galera, Bulalacao Bay. -FOWLER & BEAN, U. S. Nat. Mus., Bull. 100, vol. 8, 1929, p. 108. -WEBER & BEAUFORT, Fish. Indo-Austral. Arch., VII, 1936, p. 90.

Tetragonoptrus (Chaetodontops) selene BLEEKER, Atlas Ichth. Ind. Néerl., vol. 9, 1877, p. 44, pl. (15) 377, fig. 5. Celebes; Solor; Amboina.

D. XII, 21; A. III, 18; scales 33 between gill opening and caudal base; 7 scales above lateral line, 13 below; gill rakers on first arch 4+12. Head 3 in length; depth 1.5; eye 4.3 in head; snout 2.4; interorbital 3.7; depth of caudal peduncle 3.2. Body very deep, much compressed. Snout conical, prominent, much longer than eye. Color yellowish brown, each scale above lateral line before its arch with small yellow, median spot. A broad crescentlike brown band runs along base of dorsal, passes along caudal peduncle and terminates on soft anal; both its ends are pointed. Below lateral line each scale with narrow dark yellowish line following in median course of scale rows. Brown band from predorsal down to eye; below eye yellow band across cheek, narrowing below. Broadly yellow diffuse interocular band; dorsal, anal and caudal yellow; soft dorsal and anal each with broad pale edge and submarginal dark line; caudal broadly pale behind.

Described and figured from a single specimen, 117 mm long (Cat. No. 8889), from Kashiwajima, April 3, 1960.

Southern Japan to the East Indies and Arabia. In Japan it seems to go as far north as Yokohama.

Scorpaenidae

11. *Kanekonia florida* TANAKA Hana-chigo-okoze

Kanekonia florida TANAKA, Zool. Mag., Tokyo, vol. 27, 1915, p. 566. Nagasaki. -TANAKA, Figs. & Descripts. Fish. Japan, 1918, p. 510, pl. 136, fig. 380. After type.

D. XII, 9; A. I, 9; P. 15; V. I, 2; gill rakers on first arch 4+8. Head 2.7 in length; depth 3; eye 5.6 in head; snout 3.1; interorbital 5.5; depth of caudal peduncle 3.7. Body oblong, slightly campressed; caudal peduncle very short, much compressed. Skin naked; lateral line high, concurrent with back, represented by 9 pores. Color brownish gray, whitish below. Brownish small spots scattered on head, sides and lower parts of body and pectoral; tip of caudal brownish.

Described from a single specimen, 38 mm in total length (Cat. No. 1947), from Urado, Kōchi City, August 15, 1951. I identify my specimen with this species with some doubts.

Only known from Nagasaki Market.

Cottidae

12. *Pseudoblennius marmoratus* (DÖDERLEIN) Aya-anahaze

Centridermichthys marmoratus DÖDERLEIN, Fische Japans, III, 1884, p. 210. Tōkyō. -STEINDACHNER, Fische Japans, IV, 1887, p. 259.
Pseudoblennius marmoratus JORDAN & STARKS, Proc. U. S. Nat. Mus., 27, 1904, p. 314. Misaki and Enoshima. -WATANABE, Fauna Japonica, Cottidae (Pisces), 1960, p. 150, pl. 34, figs. 1—2.

D. IX, 20; A. 17; P. 13; pores of lateral line 37. Head 3 in length; depth 3.7; eye 5 in head; snout 3.8; interorbital 6.4; depth of caudal peduncle 5.3. Lower jaw included; maxillary reaching to below posterior border of pupil. Preopercle with a small sharp

spine at angle. Superorbital tentacle small and flat, slightly longer than pupil; small nasal tentacles present. Spinous dorsal elevated in front and with a round notch at its middle; second spine longest, its length 2 in head. Caudal rounded. Color brown, paler below; back above lateral line with dark cross bands; the first at front of spinous dorsal; the second just behind middle of spinous dorsal. Sides below lateral lines mottled with irregular dark blotches.

Described from a single specimen, 120 mm long (Cat. No. 9830), from Okinoshima, Kōchi Prefecture, April 17, 1959. The dimensions of the other specimen, 80 mm long (Cat. No. 9942), from the same place, is read as follows: Head 3.4 in length; depth 3.4; eye 4.5 in head; snout 3.6; interorbital 3.6; depth of caudal peduncle 2.6.

Onagawa, Miyagi Prefecture to Hatsushima, Shizuoka Prefecture.

Triglidae

13. *Lepidotrigla punctipectoralis* FOWLER Hire-hoshi-kanagashira

Lepidotrigla punctipectoralis FOWLER, Proc. U. S. Nat. Mus., 85, 1940, p. 107, fig. 51. Philippines.

D. IX, 15; A. 16; scales in lateral line 60, 4 above to soft dorsal origin. Head 2.9 in length; depth 4.4; eye 3.7 in head; snout 2.3; interorbital 4.1; depth of caudal peduncle 6.7. Maxillary not reaching below anterior margin of eye, its length 2.5 in head. Teeth minutely villiform in bands in jaws, upper band broadly exposed when mouth closes; interorbital space deeply concave. Pair of broadly flattened, triangular rostral spines, its height about 2 in eye, edges of each entire, except outer basal part, which is serrated. Along bases of dorsals each side 23 bony bucklers, each armed with a strong spine. Second dorsal spine longest, 1.6 in head. Pectoral reaching above base of 5 th anal ray; ventral reaching base of second anal ray. Color pale reddish, whitish below. Upper part of pectoral largely black, all rays on outer surfaces whitish; in black area scattered small white spots; edge of the fin white all around.

Described from a single specimen, 132 mm long (Cat. No. 9771), from Mimase, Kōchi City, by Mr. Osamu Yamawaki, a student of Kōchi University, October 26, 1960. The dimensions of the other specimen, 138 mm long (Cat. No. 9957), from the same place, is read as follows: Head 2.8 in length; depth 4.2, eye 3.9 in head; snout 2.4; interorbital 4.3; depth of caudal peduncle 6.5.

Hakata and Nagasaki to Samar, Philippines.

Stichaeidae

14. *Ernogrammus hexagrammus* (TEMMINCK & SCHLEGEL) Musuji-gaji

Stichaeus hexagrammus TEMMINCK & SCHLEGEL, Fauna Japonica, Poiss., 1846, p. 136, pl. 73, fig. 1. Bay of Shimabara, near Nagasaki. -GÜNTHER, Cat. Fish. Brit. Mus., III, 1861, p. 284.

Ernogrammus hexagrammus JORDAN & SNYDER, Proc. U. S. Nat. Mus., 25, p. 490, fig. 23.

D. XLI; A. I, 27. Head 3.6 in length; depth 5.7; eye 4.6 in head; snout 5.6; interorbital 14; depth of caudal peduncle 3.5. Body compressed; head low, somewhat flattened above; snout pointed. Jaws subequal; maxillary extending below anterior border of pupil. Head naked; body closely covered with minute scales. Lateral line 3 in number, with very short branches above and below. Dorsal united to base of caudal. Color yellowish brown, with indefinite, dark, vertical bands. Side of head with 3 oblique, dark bands; pectoral with 4 narrow, blackish bars; caudal edged with white.

Described from a single specimen, 60 mm long (Cat. No. 9849), from Kashiwajima, October 15, 1957. The dimensions of the other two specimens, 62 (Cat. No. 9954) and 90 (Cat. No. 9955) mm long respectively, from the same place, are read as follows: Head 3.8—3.9 in length; depth 5.6—6, in head; eye 4.6—5; snout 4; interorbital 7; depth of caudal peduncle 3.3—3.5.

Bay of Shimabara and Miyajima to Hokkaidō and De Castries Bay.

Parapercidae

Kochichthys, n. gen.

(Genotype. -*Neopercis flavofasciata* KAMOHARA)

Because I have found by a kind letter from Dr. Gilbert P. Whitley, Australian Museum, that the generic name Kochia (Repts. Usa Mar. Biol. Sta., vol. 7, no. 2, p. 11, 1960) is preoccupied according to Neave's Nomenclator Zoologicus, I substitute the above name for Kochia. My synopsis of the characters of the genus is reproduced herewith.

This new genus is related to *Parapercis* BLEEKER, 1863 (Genotype. -*Sciaena cylindrica* BLOCH), but differs from it in having only two dorsal spines, instead of four or five, and lower jaw much shorter than the upper. Named after Kōchi City.

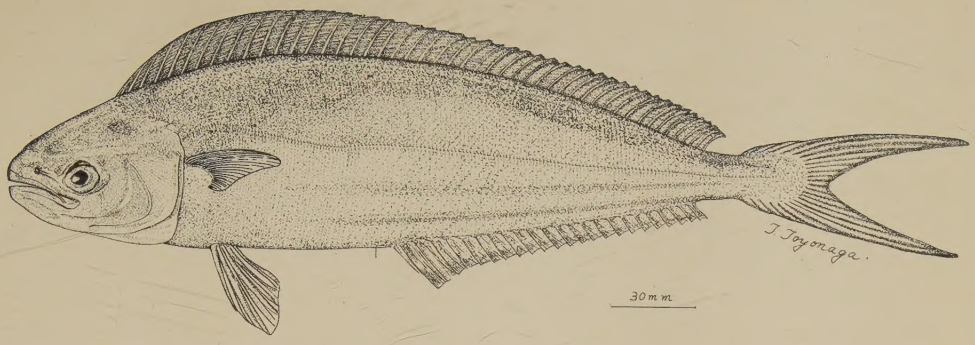

Fig. 1. *Coryphaena equisetis* LINNAEUS

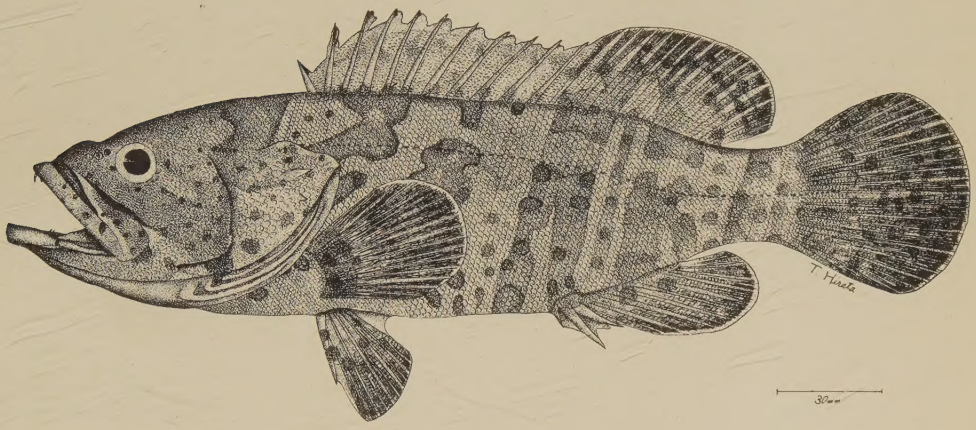

Fig. 2. *Epinephelus malabaricus* (BLOCH & SCHNEIDER)

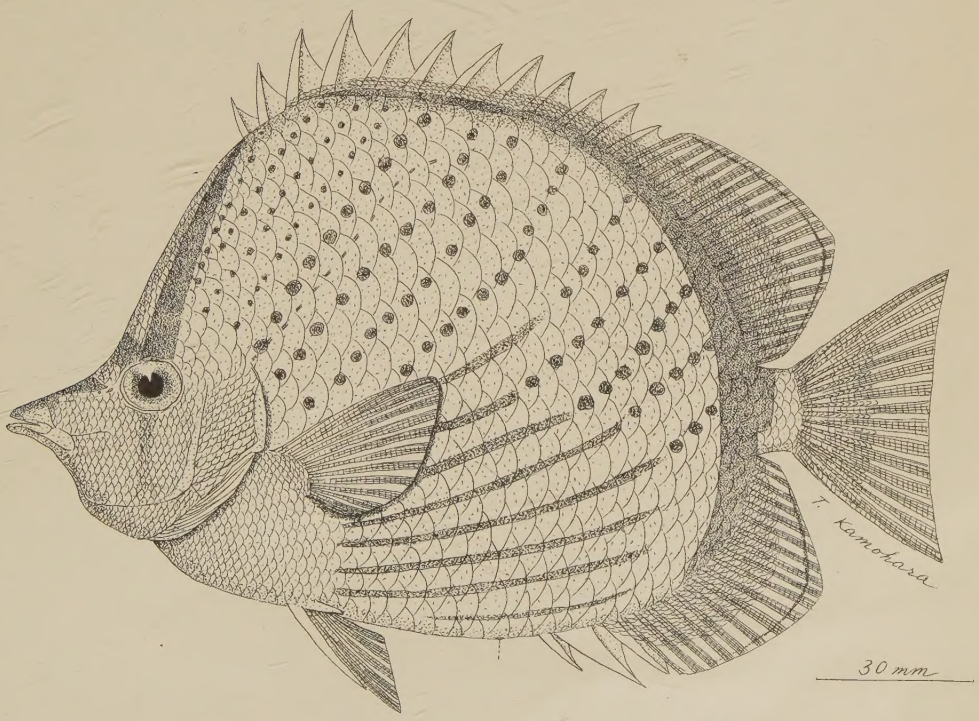

Fig. 3. *Chaetodon selene* BLEEKER

昭和36年2月3日印刷
昭和36年2月10日発行

編集兼発行者　高知大学文理学部
附属宇佐臨海実験所
高知市朝倉乙ノ1000
高知大学文理学部内

印刷者　坂本重寿

印刷所　高知印刷株式会社
高知市本町154

A List of the Contents of Repts. Usa Mar. Biol. Sta.

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Vol. 7, No. 1, KAMOHARA, T. 1960 : On the fishes of the genus Chromis (Family Amphiprionidae, Chromides, Pisces), found in the waters of Japan.

No. 2, KAMOHARA, T. 1960 : A review of the fishes of the family Parapercidae found in the waters of Japan.

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